MULTIMEDIA UNIVERSITY ®

STUDENT ID NO

MULTIMEDIA UNIVERSITY

FINAL EXAMINATION

TRIMESTER 3, 2022 / 2023

DCA5114 – COMPUTER TECHNOLOGY AND APPLICATIONS

(All sections / Group)

05 OCTOBER 2023
9.00 a.m.– 11.00 a.m.
(2 Hours)

INSTRUCTIONS TO STUDENTS

1. This Question paper consists of 2 pages excluding cover page with 4 Questions only.

2. Answer **ALL** questions. All questions carry equal marks and the distribution of the marks for each question is given.

3. Please write all your answers in the Answer Booklet provided.

QUESTION 1 (25 marks)

(a) Give examples of four major components inside the system unit of a computer and explain their respective functions [10 marks]

(b) Describe three different types of digital storage and compare their differences, considering factors such as capacity, speed, reliability, and portability. [12 marks]

(c) Discuss the importance of ergonomic design in input devices and how it benefits the end-users. [3 marks]

QUESTION 2 (25 marks)

(a) Compare the web browser and search engine in terms of how they facilitate access to information on the Internet. Provide an example for each. [6 marks]

(b) Explain the difference between an IP address and a domain name on the Internet. Provide an example for each. [4 marks]

(c) Describe the following forms of Internet communication, email, instant messaging, and video conferencing. Compare their advantages and disadvantages for different communication scenarios. [9 marks]

(d) One similarity between open-source software and freeware is that both are available for free, and users can download and use both types of software without paying any fees. Contrast the main difference between the two models and describe the limitation of each for end-users [6 marks]

QUESTION 3 (25 marks)

(a) Describe three major types of operating systems commonly used in mobile devices. [10 marks]

(b) Discuss the role of a device driver in an operating system and its significance in ensuring hardware compatibility and functionality. [5 marks]

(c) Explain the concept of virtual memory and how the operating system manages it. Discuss the benefits of using virtual memory and the potential issues that may arise if not managed properly. [10 marks]

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QUESTION 4 (25 marks)

(a) Discuss the three common types of malicious software (malware) and provide two approaches to mitigate the threats. [10 marks]

(b) Describe multifactor authentication and the reason it is safer than using only passwords. [4 marks]

(c) Describe the three risks that arise from the use of wireless local area networks (WLANs) rather than wired networks. [6 marks]

(d) Explain social engineering and why it is an effective cyberattack technique. [5 marks]

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